

LAKE MANAGEMENT PLANS

updated June, 2008 - J.W. Korth

Water(s): Beda and Brookies Lakes

Location: Desert Wildlife Area, Sec 15, 22 T18N R26E; approximately 18 miles south of Ephrata and 12 miles southwest of Moses Lake, Grant County, WA

	Size:	Maximum Depth:	Volume:
Beda	45 acres	25 feet	350.6 acre feet
Brookies	20 acres	15 feet	200.0 acre feet

Water Source: subsurface seepage springs

Outflow: subsurface

Management History: Beda and Brookies lakes consist of a series of five lakes of diminishing size in a north-south line, with Beda being the largest and northernmost water. Extremely rich in nutrients, all have been managed as trout fisheries since their formation from rising groundwater tables in the 1960s. Like most wetlands in the Columbia Basin, they were formed as groundwater tables rose following irrigation development. Beda was first stocked with eastern brook trout in 1963. In 1966, the stocked species was changed to rainbow trout, and this still remains the species of choice. Brookies lakes apparently formed later, and these four, small and connected waters were first stocked in 1976.

Plants of rainbow trout occur annually, and stocking levels have hovered at about 14,000 rainbow for Beda Lake and 3,000 cumulative for the Brookies Lakes. Spokane rainbow were originally used, but were switched later to Eagle Lakes rainbow stock in 1984 to reduce crowding at the Columbia Basin Hatchery. More recently, in 1994, the stock was again switched to Mt Whitney's - another, more available and also a later spawning stock of rainbow trout. With regulation changes in 1997, the allotment for Beda Lake has been reduced to about 10,000 rainbow trout.

Year around seasons and statewide regulations, daily limit of five trout, and bait allowed, have been in effect for most of the fishable history of these waters. Access restrictions (vehicle approach is limited to within 0.25-0.50 miles) spread angler use over the entire season, and Beda was considered a favorite among fly fishers early in its history. In response to increasing crowds of anglers at these waters and popular demand for more selective fisheries statewide, regulations were changed in 1997. While still open year around, selective fishery regulations now apply: single, barbless hooks and no bait, and the limit is one fish.

When competing species are controlled, Beda and Brookies lakes are capable of producing excellent catches throughout the season. In the early years, these waters yielded 5-6 trout per

angler trip and frequent incidence of fish over two pounds. As their popularity grew, catches settled down to about three fish per angler in the 1970s. Yearlings were about 11 inches and 14-20 inch fish were still relatively common.

Sunfish were discovered in these waters in the mid-1970s, and catch rates dropped to about one fish per trip. Largemouth bass were illegally introduced into Beda Lake in the late 1980s, and the lake gained some local notoriety as a fair bass fishery during the early 1990s while the rainbow catch dropped to about 0.3 fish/angler. The lakes were restored to trout fisheries in 1995 through rehabilitation, and catch rates, as well as angler participation, increased dramatically.

Unfortunately, the sunfish persisted, and the fishery began to decline again in 1998. The last rehabilitation was in 2000. White sturgeon happened to be available at the time, and about a dozen 14" fish were stocked in an effort to control remaining sunfish. Several hundred fingerling sturgeon were stocked a few years later. However, by 2005 sunfish again had the upper hand. Brown and tiger trout have also been stocked with the same end in mind, and the same results.

Beda Lake has been managed with larger rainbow made available through the Trophy Trout Program. These pound and a half triploids are purchased from private hatcheries (currently TroutLodge, Inc.) at about \$3/fish. When 3-5,000 are stocked in Beda, a fair to good fishery ensues for the spring. For unknown reasons, few to none remain by fall or carryover to the following spring.

Despite four rehabilitations for Brookies Lakes and four rehabilitations for Beda Lake, pumpkinseed sunfish have persisted. The usual cause for eventual poor trout survival has been a corresponding increase in pumpkinseed sunfish, which compete for the food base. The lakes are fed by subsurface seeps. These seeps, along with the dense fringe of emergent vegetation, probably provide freshwater havens for the targeted species during treatment. No surface connection exists between these waters and the wasteway to allow fish passage. Illegal introductions are undoubtedly the origin of unwanted species in these waters, probably introduced as prey for bass.

Rehabilitation and total fish eradication are difficult enterprises for these lakes; however, angler participation in the trout fisheries make these projects worthwhile relative to the amount of effort and cost involved in treatment even if required every five years.

T&E Flora and Fauna: Professionals from many resource fields have visited this site countless times during the last 40 years. No known report exists of any threatened or endangered species habitually found in or near these lakes. Occasional visits from both bald and golden eagles occur, although no nests of these two species are known in the area. Protected species of waterfowl and other birds frequently are found here at times, as well.

Current Management Objectives:

Continue to manage these lakes for trout fisheries. Year around season, selective fishery. One fish limit, no size restrictions. Provide at least four yearling and one carryover rainbow trout per angler trip for at least 1,000 anglers per season.

1. Fishery Objectives:

<u>Species</u>	<u>Type</u>	<u>Category</u>	<u>Number of Fish</u>		<u>Avg. Size</u>	<u>Exploit.</u>
			<u>/hour</u>	<u>/Angler</u>		<u>Rate</u>
Rainbow	Prod	Selective	2-3	4+	13 inches	80% 1-yr-olds
		Fishery		1+	16+ inches	20% 2+-yr-olds

2. Angler use objective (# angler days): Season - 1,000 +

3. Stocking Objectives:

<u>Lake</u>	<u>Species</u>	<u>Number of Fish Stocked</u>			<u>Planting Month</u>
		<u>Total</u>	<u>/Acre</u>	<u>/pound</u>	
Beda	Rainbow	10,000	200	<20	October
Brookies	Rainbow	3,000	150	<20	October

E. Management Strategy:

- Plant rainbow fingerlings in fall.
- Check yearling growth; should be about 13 inches, adjust stocking rate as necessary.
- Expect 80% loss of yearling fish by end of year due to harvest and hooking mortality and natural attrition.
- Maintain about 15-20 percent of the catch at age 2+ years old, 16-20+ inch fish.
- Spot check angling activity randomly as time allows.
- Monitor all fish species periodically by electrofishing or netting.
- Control spiny-ray species with rotenone when trout survival is inadequate to produce an acceptable fishery.
- Consider the use of sterile, triploid rainbow trout and brown trout